R E M A R K S

Claims 11 to 49 as set forth in Appendix I of this paper are now pending in this case. Claims 25 to 27 have been amended as indicated in accordance with the Examiner's suggestion to place the application in condition for allowance. Early action by the Examiner would be greatly appreciated by applicants.

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees, to Deposit Account No. 11.0345. Please credit any excess fees to such deposit account.

Respectfully submitted,

KEIL & WEINKAUF

A handwritten signature in cursive script, appearing to read "D. S. Kim".

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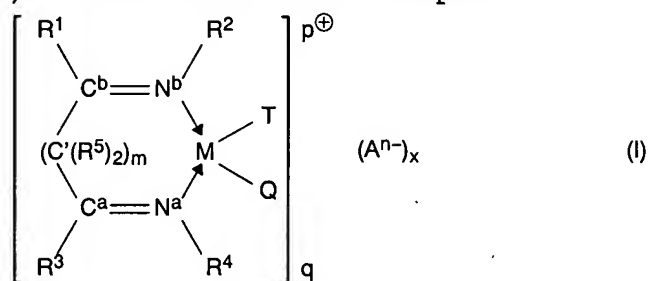
Encl.: THE LISTING OF CLAIMS (Appendix I)

HBK/BAS

## A P P E N D I X I:

THE LISTING OF CLAIMS:

1. (canceled)
2. (canceled)
3. (canceled)
4. (canceled)
5. (canceled)
6. (canceled)
7. (canceled)
8. (canceled)
9. (canceled)
10. (canceled)
11. (previously presented) A transition metal compound of formula



wherein:

- $\text{R}^1$ ,  $\text{R}^3$  are hydrogen,  $\text{C}_1$ - $\text{C}_{20}$ -alkyl,  $\text{C}_3$ - $\text{C}_{10}$ -cycloalkyl,  $\text{C}_6$ - $\text{C}_{16}$ -aryl, alkylaryl having from 1 to 10 carbon atoms in the alkyl part and from 6 to 16 carbon atoms in the aryl part,  $\text{Si}(\text{R}^6)_3$ ,  $\text{N}(\text{R}^6)(\text{R}^7)$ ,  $\text{OR}^6$ ,  $\text{SR}^6$ , or  $\text{R}^1$  and  $\text{R}^3$  together with  $\text{C}^a$ ,  $\text{C}^b$  and, if present,  $\text{C}'$  form a five-, six- or seven-membered aliphatic or aromatic, substituted or unsubstituted carbocyclic or heterocyclic ring,
- $\text{R}^2$ ,  $\text{R}^4$  are  $\text{C}_4$ - $\text{C}_{16}$ -heteroaryl or  $\text{C}_6$ - $\text{C}_{16}$ -aryl bearing  $\text{C}_4$ - $\text{C}_{16}$ -heteroaryl or  $\text{C}_6$ - $\text{C}_{16}$ -aryl substituents in the two vicinal positions relative to the linkage point to  $\text{N}^a$  or  $\text{N}^b$ ,
- $\text{R}^5$  is hydrogen,  $\text{C}_1$ - $\text{C}_{10}$ -alkyl,  $\text{C}_6$ - $\text{C}_{16}$ -aryl or alkylaryl having from 1 to 10 carbon atoms in the alkyl part and from 6 to 16 carbon atoms in the aryl part,

R<sup>6</sup>, R<sup>7</sup> are C<sub>1</sub>-C<sub>10</sub>-alkyl, C<sub>6</sub>-C<sub>16</sub>-aryl or alkylaryl having from 1 to 10 carbon atoms in the alkyl part and from 6 to 16 carbon atoms in the aryl part,

m is 0 or 1,

M is a metal of group VIII B of the Periodic Table of the Elements,

T, Q are uncharged or monoanionic monodentate ligands or T and Q together form a diketoenolate unit or a C<sub>2</sub>- or C<sub>3</sub>-alkylene unit having a methyl ketone end group or a linear C<sub>1</sub>-C<sub>4</sub>-alkylester or nitrile end group,

A is a noncoordinating or weakly coordinating anion,

x, p are 0, 1, 2 or 3 and

q, n are 1, 2 or 3.

12. (previously presented) The transition metal compound of claim 11, wherein R<sup>2</sup> and R<sup>4</sup> are, independently of one another,

2,6-diphenylphenyl, 2,6-di(4'-methylphenyl)phenyl, 2,6-di(4'-t-butylphenyl)phenyl, 2,6-di(4'-methoxyphenyl)phenyl, 2,6-bis(3',5'-dimethylphenyl)phenyl, 2,6-bis(2',4',6'-trimethylphenyl)phenyl, 2,5-diphenylpyrrolidyl, 2,5-di(4'-methylphenyl)-pyrrolidyl, 2,5-di(4'-t-butylphenyl)pyrrolidyl, 2,5-di(4'-methoxyphenyl)pyrrolidyl, 2,5-bis(3',5'-dimethylphenyl)-pyrrolidyl, 2,5-bis(2',4',6'-trimethylphenyl)pyrrolidyl, 2,5-diphenylpyrrolide, 2,5-di(4'-methylphenyl)pyrrolide, 2,5-di(4'-t-butylphenyl)pyrrolide, 2,5-di(4'-methoxyphenyl)-pyrrolide, 2,5-bis(3',5'-dimethylphenyl)pyrrolide or 2,5-bis(2',4',6'-trimethylphenyl)pyrrolide.

13. (previously presented) The transition metal compound of claim 11, wherein R<sup>2</sup> and R<sup>4</sup> are 2,6-di(4'-methoxyphenyl)phenyl or 2,5-di(4'-methoxyphenyl)-pyrrolidyl.

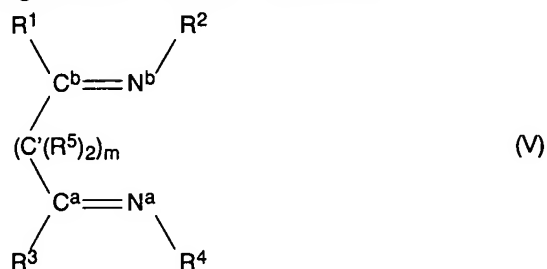
14. (previously presented) The transition metal compound of claim 11, wherein M is palladium or nickel.

15. (previously presented) The transition metal compound of claim 11, wherein T is halide or methyl and Q is halide.

16. (previously presented) The transition metal compound of claim 11, wherein R<sup>2</sup> and R<sup>4</sup> are both 2,6-diphenylphenyl and m is 0.

17. (previously presented) The transition metal compound of claim 16, wherein R<sup>1</sup> and R<sup>3</sup> are hydrogen or methyl.

18. (previously presented) The transition metal compound of claim 11, wherein  $R^2$  and  $R^4$  are both [2,6-bis(4-t-butylphenyl)phenyl] and  $m$  is 0.
19. (previously presented) The transition metal compound of claim 18, wherein  $R^1$  and  $R^3$  are hydrogen or methyl.
20. (previously presented) The transition metal compound of claim 11, wherein  $M$  is Ni.
21. (previously presented) The transition metal compound of claim 20, wherein  $T$  and  $Q$  are chloride, bromide or iodide anions.
22. (previously presented) A compound of the formula



wherein:

- $R^1$ ,  $R^3$  are hydrogen,  $C_1$ - $C_{20}$ -alkyl,  $C_3$ - $C_{10}$ -cycloalkyl,  $C_6$ - $C_{16}$ -aryl, alkylaryl having from 1 to 10 carbon atoms in the alkyl part and from 6 to 16 carbon atoms in the aryl part,  $Si(R^6)_3$ ,  $N(R^6)(R^7)$ ,  $OR^6$ ,  $SR^6$ , or  $R^1$  and  $R^3$  together with  $C^a$ ,  $C^b$  and, if present,  $C'$  form a five-, six- or seven-membered aliphatic or aromatic, substituted or unsubstituted carbocyclic or heterocyclic ring,
- $R^2$ ,  $R^4$  are  $C_4$ - $C_{16}$ -heteroaryl or  $C_6$ - $C_{16}$ -aryl bearing  $C_4$ - $C_{16}$ -heteroaryl or  $C_6$ - $C_{16}$ -aryl substituents in the two vicinal positions relative to the linkage point to  $N^a$  or  $N^b$ ,
- $R^5$  is hydrogen,  $C_1$ - $C_{10}$ -alkyl,  $C_6$ - $C_{16}$ -aryl or alkylaryl having from 1 to 10 carbon atoms in the alkyl part and from 6 to 16 carbon atoms in the aryl part,
- $R^6$ ,  $R^7$  are  $C_1$ - $C_{10}$ -alkyl,  $C_6$ - $C_{16}$ -aryl or alkylaryl having from 1 to 10 carbon atoms in the alkyl part and from 6 to 16 carbon atoms in the aryl part; and
- $m$  is 0 or 1.
- $M$  is a metal of group VIIIB of the Periodic Table of the Elements,

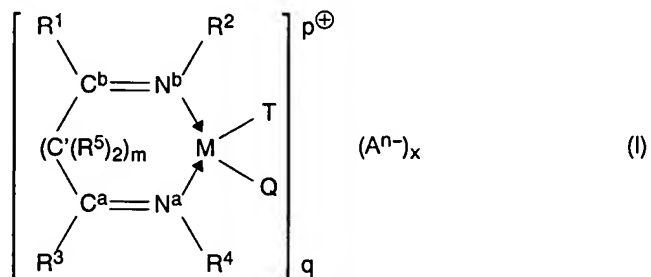
T, Q are uncharged or monoanionic monodentate ligands or T and Q together form a diketoenolate unit or a C<sub>2</sub>- or C<sub>3</sub>-alkylene unit having a methyl ketone end group or a linear C<sub>1</sub>-C<sub>4</sub>-alkylester or nitrile end group,

A is a noncoordinating or weakly coordinating anion,

x, p are 0, 1, 2 or 3 and

q, n are 1, 2 or 3.

23. (previously presented) The compound of claim 22, wherein R<sup>2</sup> and R<sup>4</sup> are, independently of one another,  
2,6-diphenyl-, 2,6-di(4'-methylphenyl)-, 2,6-di(4'-t-butylphenyl)-, 2,6-di(4'-methoxyphenyl)-, 2,6-bis-(3',5'-dimethylphenyl)- or 2,6-bis(2',4',6'-trimethylphenyl)phenyl,  
2,5-diphenyl-, 2,5-di(4'-methylphenyl)-, 2,5-di(4'-t-butylphenyl)-, 2,5-di(4'-methoxyphenyl)-, 2,5-bis-(3',5'-dimethylphenyl)- or 2,5-bis(2',4',6'-trimethylphenyl)pyrrolidyl, or  
2,5-diphenyl-, 2,5-di(4'-methylphenyl)-, 2,5-di(4'-t-butylphenyl)-, 2,5-di(4'-methoxyphenyl)-, 2,5-bis(3',5'-dimethylphenyl)- or 2,5-bis(2',4',6'-trimethylphenyl)pyrrolide.
24. (previously presented) The compound of claim 22, wherein R<sup>2</sup> and R<sup>4</sup> are both 2,6-diphenylphenyl and m is 0.
25. (currently amended) The ~~transition-metal~~ compound of claim 24, wherein R<sup>1</sup> and R<sup>3</sup> are hydrogen or methyl.
26. (currently amended) The ~~transition-metal~~ compound of claim 22, wherein R<sup>2</sup> and R<sup>4</sup> are both [2,6-bis(4-t-butylphenyl)phenyl] and m is 0.
27. (currently amended) The ~~transition-metal~~ compound of claim 26, wherein R<sup>1</sup> and R<sup>3</sup> are hydrogen or methyl.
28. (previously presented) A process for the polymerization of olefins which comprises contacting one or more polymerizable olefins with a compound of formula



and optionally one or more cocatalysts, and

R<sup>1</sup>, R<sup>3</sup> are hydrogen, C<sub>1</sub>-C<sub>20</sub>-alkyl, C<sub>3</sub>-C<sub>10</sub>-cycloalkyl, C<sub>6</sub>-C<sub>16</sub>-aryl, alkylaryl having from 1 to 10 carbon atoms in the alkyl part and from 6 to 16 carbon atoms in the aryl part, Si(R<sup>6</sup>)<sub>3</sub>, N(R<sup>6</sup>)(R<sup>7</sup>), OR<sup>6</sup>, SR<sup>6</sup>, or R<sup>1</sup> and R<sup>3</sup> together with C<sup>a</sup>, C<sup>b</sup> and, if present, C' form a five-, six- or seven-membered aliphatic or aromatic, substituted or unsubstituted carbocyclic or heterocyclic ring,

R<sup>2</sup>, R<sup>4</sup> are C<sub>4</sub>-C<sub>16</sub>-heteroaryl or C<sub>6</sub>-C<sub>16</sub>-aryl bearing C<sub>4</sub>-C<sub>16</sub>-heteroaryl or C<sub>6</sub>-C<sub>16</sub>-aryl substituents in the two vicinal positions relative to the linkage point to N<sup>a</sup> or N<sup>b</sup>,

R<sup>5</sup> is hydrogen, C<sub>1</sub>-C<sub>10</sub>-alkyl, C<sub>6</sub>-C<sub>16</sub>-aryl or alkylaryl having from 1 to 10 carbon atoms in the alkyl part and from 6 to 16 carbon atoms in the aryl part,

R<sup>6</sup>, R<sup>7</sup> are C<sub>1</sub>-C<sub>10</sub>-alkyl, C<sub>6</sub>-C<sub>16</sub>-aryl or alkylaryl having from 1 to 10 carbon atoms in the alkyl part and from 6 to 16 carbon atoms in the aryl part,

m is 0 or 1,

M is a metal of group VIIIB of the Periodic Table of the Elements,

T, Q are uncharged or monoanionic monodentate ligands or T and Q together form a diketoenolate unit or a C<sub>2</sub>- or C<sub>3</sub>-alkylene unit having a methyl ketone end group or a linear C<sub>1</sub>-C<sub>4</sub>-alkylester or nitrile end group,

A is a noncoordinating or weakly coordinating anion,

x, p are 0, 1, 2 or 3 and

q, n are 1, 2 or 3.

29. (previously presented) The process of claim 28 which is carried out in the presence of hydrogen.
30. (previously presented) The process of claim 28 which is carried out at a temperature of -40°C to 160°C.
31. (previously presented) The process of claim 30 which is carried out in the presence of hydrogen.
32. (previously presented) The process of claim 28 which is conducted in the presence of one or more cocatalysts.
33. (previously presented) The process of claim 32, wherein the cocatalyst is an aluminum alkyl, a haloaluminum alkyl, or an alumoxane.

34. (previously presented) The process of claim 33, wherein the alumoxane is methyl alumoxane.
35. (previously presented) The process of claim 28, wherein  $R^2$  and  $R^4$  are, independently of one another,  
2,6-diphenyl-, 2,6-di(4'-methylphenyl)-, 2,6-di(4'-t-butylphenyl)-, 2,6-di(4'-methoxyphenyl)-, 2,6-bis-(3',5'-dimethylphenyl)- or 2,6-bis(2',4',6'-trimethylphenyl)phenyl,  
2,5-diphenyl-, 2,5-di(4'-methylphenyl)-, 2,5-di(4'-t-butylphenyl)-, 2,5-di(4'-methoxyphenyl)-, 2,5-bis-(3',5'-dimethylphenyl)- or 2,5-bis(2',4',6'-trimethylphenyl)pyrrolidyl, or  
2,5-diphenyl-, 2,5-di(4'-methylphenyl)-, 2,5-di(4'-t-butylphenyl)-, 2,5-di(4'-methoxyphenyl)-, 2,5-bis(3',5'-dimethylphenyl)- or 2,5-bis(2',4',6'-trimethylphenyl)pyrrolide.
36. (previously presented) The process of claim 28, wherein  $R^2$  and  $R^4$  are both 2,6-diphenylphenyl and m is 0.
37. (previously presented) The process of claim 36, wherein  $R^1$  and  $R^3$  are hydrogen or methyl.
38. (previously presented) The process of claim 28, wherein  $R^2$  and  $R^4$  are both [2,6-bis(4-t-butylphenyl)phenyl] and m is 0.
39. (previously presented) The process of claim 38, wherein  $R^1$  and  $R^3$  are hydrogen or methyl.
40. (previously presented) The process of claim 28, wherein M is Pd or Ni.
41. (previously presented) The process of claim 40, wherein Q and T are chloride, bromide or iodide.
42. (previously presented) The process of claim 28, wherein M is Ni.
43. (previously presented) The process of claim 28, wherein one of the one or more polymerizable olefins is ethylene.
44. (previously presented) The process of claim 43, wherein ethylene is the only polymerizable olefin.
45. (previously presented) The process of claim 28, wherein a polymerizable olefin comprising a functional group is present.
46. (previously presented) The process of claim 28, which is carried out in a liquid phase.

47. (*previously presented*) The process of claim 28, which is carried out in a gas phase.
48. (*previously presented*) The process of claim 47, wherein the compound and optionally one or more of the cocatalysts are supported on a carrier.
49. (*previously presented*) The process of claim 28, wherein the compound and optionally one or more of the cocatalysts are supported on a carrier.